

Amendments to the Claims

1-5 (Canceled)

6. (Previously Presented) A method for semiconductor wafer fabrication, the method comprising:

incorporating a reactant gas that is capable of reacting with a material on the surface of a wafer into a liquid solvent that is inert to the material on the surface of the wafer to provide a reactant mixture;

forming a film of the reactant mixture on the surface of the wafer so that the reactant gas is transported through the film of reactant mixture to the surface of the wafer and reacts with the material thereon; and

cooling the wafer to a temperature equal to or less than about a dew point of the liquid solvent in the reactant mixture to facilitate the formation of the film of the reactant mixture on the surface of the wafer.

7. (Previously Presented) The method of claim 6, wherein the reactant gas is inert with respect to the liquid solvent.

8. (Original) The method of claim 6, wherein the thin film of the reactant mixture has a thickness of from about 1 micron to about 100 microns.

9. (Previously Presented) The method of claim 6, further including flowing the reactant gas over the thin film of the reactant mixture such that some of the flowing reactant gas is transported through the film to the surface of the wafer.

10. (Canceled)

11. (Original) A method for removing a material from a surface of a semiconductor wafer, the method comprising:

selecting a reactant gas capable of reacting with a material on a wafer surface;

condensing a liquid solvent onto a surface of the wafer from which material is to be removed, the liquid solvent being inert to the material on the wafer surface; and

exposing the condensed liquid solvent to the reactant gas, the reactant gas being inert to the solvent and reacting with the material on the wafer surface to remove such material.

12. (Previously Presented) The method of claim 11, further including incorporating reactant gas into the liquid solvent to form a liquid solvent that comprises a reactant mixture that contains reactant gas, and wherein the step of condensing the liquid solvent comprises condensing the reactant mixture on a surface of the wafer such that the reactant gas reacts with and removes the material on the wafer surface.

13. (Previously Presented) The method of claim 11, further including removing the reactant mixture from the wafer surface.

14. (Original) A method for semiconductor wafer fabrication, the method comprising:
vaporizing a liquid solvent that is inert to a material on a surface of a wafer;
selecting a reactant gas that is capable of chemically reacting with the material on the surface of the wafer;
incorporating the reactant gas into the vaporized liquid solvent; and
condensing the vaporized solvent incorporating the reactant gas to form a film on the surface of the wafer so that the reactant gas is transported through the film to the material on the surface of the wafer.

15. (Previously Presented) The method of claim 14, further including flowing the reactant gas over the film such that some of the flowing reactant gas is transported through the film to the surface of the wafer and cooling the vaporized liquid solvent to facilitate condensation of the vaporized liquid solvent on the surface of the wafer.

16-36 (Canceled)

37. (Previously Presented) A method for removing photoresist material from the surface of the wafer, the method comprising:

vaporizing a mixture of water and ozone gas;
condensing a layer of the mixture on a wafer surface having photoresist material thereon; and
reacting the ozone gas in the mixture with the photoresist material on the wafer surface to remove the photoresist material therefrom.

38-50 (Canceled)